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## RAW SEQUENCE LISTING

DATE: 05/07/2002

PATENT APPLICATION: US/10/062,879

TIME: 11:33:41

Input Set : N:\Crif3\RULE60\10062879.raw

Output Set: N:\CRF3\05072002\J062879.raw

1 <110> APPLICANT: Cockett, Mark I.  
 2 Dilks, Daniel W.  
 3 Chang Ling, Huai-Ping  
 4 Sokol, Patricia T.  
 5 <120> TITLE OF INVENTION: Human Potassium Channel Polynucleotides and  
 6 Polypeptides and Uses Therefor  
 7 <130> FILE REFERENCE: ahp-98089  
 8 <140> CURRENT APPLICATION NUMBER: 10/062,879  
 9 <141> CURRENT FILING DATE: 2002-01-31  
 11 <150> PRIOR APPLICATION NUMBER: US/09/178,109  
 12 <151> PRIOR FILING DATE: 1998-10-23  
 15 <160> NUMBER OF SEQ ID NOS: 4  
 16 <170> SOFTWARE: PatentIn Ver. 2.0  
 18 <210> SEQ ID NO: 1  
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 20 <212> TYPE: DNA  
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 25 atcgggtgga tgccggtggc caactgcccc atgcccctgg ccccgccga caagaacaag 180  
 26 cggcaggatg agctgattgt cctcaactgt agtggcgga ggttcagac ctggaggacc 240  
 27 acgctggagc gctaccgga caccctgctg ggcagcacgg agaaggagt cttcttcaac 300  
 28 gaggacacca aggagtactt cttagaccgg gaccccgagg tgttcgctg cgtgctcaac 360  
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 30 gagctggcct tctacggcat cctcccggag atcatcgagg actgctgcta cgaggagtac 480  
 31 aaggaccgca agaggagaa cgcgagcgg ctcattgacg acaacgactc ggagaacaac 540  
 32 caggagtcca tgccctcgct cagcttccgc cagaccatgt ggcgggcctt cgagaacccc 600  
 33 cacaccagca cgctggccct ggtctttctac tacgtgactg gcttcttcat cgtgtctcg 660  
 34 gtcataacca acgtggtgga gacggtgccc tgccggcacgg tcccgggcag caaggagctg 720  
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 38 accaacaacg aggacgtgtc cggcgccctt gtcacgctcc gggctctccg cgtcttcaag 960  
 39 atcttcaagt tttcccgcca ctcccagggc ctgcggatcc tgggctacac actgaagagc 1020  
 40 tgtgctcccg aactgggctt tcttctcttc tccctacca tggccatcat catctttgcc 1080  
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49      ctgttatctg tacgaacctc caccatcaag aaccacgagt ttattgatga gcagatgttt 1620
50      gagcagaact gcatggagag ttcaatgcag aactacccat ccacaagaag tccctcactg 1680
51      tccagccacc caggcctcac taccacctgc tgctcccgtc gtagtaagaa gaccacacac 1740
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53      cacatccagg gcagtgcgca gccctccctc acaaccagtc gctccagcct taatttgaaa 1860
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67      Ile Gly Trp Met Pro Val Ala Asn Cys Pro Met Pro Leu Ala Pro Ala
68          20             25             30
69      Asp Lys Asn Lys Arg Gln Asp Glu Leu Ile Val Leu Asn Val Ser Gly
70          35             40             45
71      Arg Arg Phe Gln Thr Trp Arg Thr Thr Leu Glu Arg Tyr Pro Asp Thr
72          50             55             60
73      Leu Leu Gly Ser Thr Glu Lys Glu Phe Phe Phe Asn Glu Asp Thr Lys
74          65             70             75             80
75      Glu Tyr Phe Phe Asp Arg Asp Pro Glu Val Phe Arg Cys Val Leu Asn
76          85             90             95
77      Phe Tyr Arg Thr Gly Lys Leu His Tyr Pro Arg Tyr Glu Cys Ile Ser
78          100            105            110
79      Ala Tyr Asp Asp Glu Leu Ala Phe Tyr Gly Ile Leu Pro Glu Ile Ile
80          115            120            125
81      Gly Asp Cys Cys Tyr Glu Glu Tyr Lys Asp Arg Lys Arg Glu Asn Ala
82          130            135            140
83      Glu Arg Leu Met Asp Asp Asn Asp Ser Glu Asn Asn Gln Glu Ser Met
84          145            150            155            160
85      Pro Ser Leu Ser Phe Arg Gln Thr Met Trp Arg Ala Phe Glu Asn Pro
86          165            170            175
87      His Thr Ser Thr Leu Ala Leu Val Phe Tyr Tyr Val Thr Gly Phe Phe
88          180            185            190
89      Ile Ala Val Ser Val Ile Thr Asn Val Val Glu Thr Val Pro Cys Gly
90          195            200            205
91      Thr Val Pro Gly Ser Lys Glu Leu Pro Cys Gly Glu Arg Tyr Ser Val
92          210            215            220
93      Ala Phe Phe Cys Leu Asp Thr Ala Cys Val Met Ile Phe Thr Val Glu
94          225            230            235            240
95      Tyr Leu Leu Arg Leu Phe Ala Ala Pro Ser Arg Tyr Arg Phe Ile Arg
96          245            250            255
97      Ser Val Met Ser Ile Ile Asp Val Val Ala Ile Met Pro Tyr Tyr Ile

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99 Gly Leu Val Met Thr Asn Asn Glu Asp Val Ser Gly Ala Phe Val Thr
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101 Leu Arg Val Phe Arg Val Phe Arg Ile Phe Lys Phe Ser Arg His Ser
102          290          295          300
103 Gln Gly Leu Arg Ile Leu Gly Tyr Thr Leu Lys Ser Cys Ala Ser Glu
104          305          310          315          320
105 Leu Gly Phe Leu Leu Phe Ser Leu Thr Met Ala Ile Ile Ile Phe Ala
106          325          330          335
107 Thr Val Met Phe Tyr Ala Glu Lys Gly Ser Ser Ala Ser Lys Phe Thr
108          340          345          350
109 Ser Ile Pro Ala Ser Phe Trp Tyr Thr Ile Val Thr Met Thr Thr Leu
110          355          360          365
111 Gly Tyr Gly Asp Met Val Pro Lys Thr Ile Ala Gly Lys Ile Phe Gly
112          370          375          380
113 Ser Ile Cys Ser Leu Ser Gly Val Leu Val Ile Ala Leu Pro Val Pro
114          385          390          395          400
115 Val Ile Val Ser Asn Phe Ser Arg Ile Tyr His Gln Asn Gln Arg Ala
116          405          410          415
117 Asp Lys Arg Arg Ala Gln Lys Lys Ala Arg Leu Ala Arg Ile Arg Val
118          420          425          430
119 Ala Lys Thr Gly Ser Ser Asn Ala Tyr Leu His Ser Lys Arg Asn Gly
120          435          440          445
121 Leu Leu Asn Glu Ala Leu Glu Leu Thr Gly Thr Pro Glu Glu Glu His
122          450          455          460
123 Met Gly Lys Thr Thr Ser Leu Ile Glu Ser Gln His His His Leu Leu
124          465          470          475          480
125 His Cys Leu Glu Lys Thr Thr Gly Leu Ser Tyr Leu Val Asp Asp Pro
126          485          490          495
127 Leu Leu Ser Val Arg Thr Ser Thr Ile Lys Asn His Glu Phe Ile Asp
128          500          505          510
129 Glu Gln Met Phe Glu Gln Asn Cys Met Glu Ser Ser Met Gln Asn Tyr
130          515          520          525
131 Pro Ser Thr Arg Ser Pro Ser Leu Ser Ser His Pro Gly Leu Thr Thr
132          530          535          540
133 Thr Cys Cys Ser Arg Arg Ser Lys Lys Thr Thr His Leu Pro Asn Ser
134          545          550          555          560
135 Asn Leu Pro Ala Thr Arg Leu Arg Ser Met Gln Glu Leu Ser Thr Ile
136          565          570          575
137 His Ile Gln Gly Ser Glu Gln Pro Ser Leu Thr Thr Ser Arg Ser Ser
138          580          585          590
139 Leu Asn Leu Lys Ala Asp Asp Gly Leu Arg Pro Asn Cys Lys Thr Ser
140          595          600          605
141 Gln Ile Thr Thr Ala Ile Ile Ser Ile Pro Thr Pro Pro Ala Leu Thr
142          610          615          620
143 Pro Glu Gly Glu Ser Arg Pro Pro Pro Ala Ser Pro Gly Pro Asn Thr
144          625          630          635          640
145 Asn Ile Pro Ser Ile Thr Ser Asn Val Val Lys Val Ser Val Leu
146          645          650          655

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150 <212> TYPE: DNA
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152 <400> SEQUENCE: 3
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156      cggcaggatg agctgattgt cctcaacgtg agtgggcgga ggttccagac ctggaggacc 240
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162      caggagtcca tgccctcgct cagcttcgcg cagaccatgt ggcgggcctt cgagaacccc 600
163      cacaccagca cgctggccct ggtcttctac tacgtgactg gcttcttcat cgctgtctcg 660
164      gtcattacca acgtgggtga gacggtgccg tgcggcacgg tcccgggcag caaggagctg 720
165      ccgtgcgggg agcgtactc ggtggccttc ttctgctgg acacggcgtg cgtcatgac 780
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193 <400> SEQUENCE: 4
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198   Asp Lys Asn Lys Arg Gln Asp Glu Leu Ile Val Leu Asn Val Ser Gly
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201           50                      55                      60
202   Leu Leu Gly Ser Thr Glu Lys Glu Phe Phe Phe Asn Glu Asp Thr Lys
203           65                      70                      75                      80
204   Glu Tyr Phe Phe Asp Arg Asp Pro Glu Val Phe Arg Cys Val Leu Asn
205           85                      90                      95
206   Phe Tyr Arg Thr Gly Lys Leu His Tyr Pro Arg Tyr Glu Cys Ile Ser
207           100                     105                     110
208   Ala Tyr Asp Asp Glu Leu Ala Phe Tyr Gly Ile Leu Pro Glu Ile Ile
209           115                     120                     125
210   Gly Asp Cys Cys Tyr Glu Glu Tyr Lys Asp Arg Lys Arg Glu Asn Ala
211           130                     135                     140
212   Glu Arg Leu Met Asp Asp Asn Asp Ser Glu Asn Asn Gln Glu Ser Met
213           145                     150                     155                     160
214   Pro Ser Leu Ser Phe Arg Gln Thr Met Trp Arg Ala Phe Glu Asn Pro
215           165                     170                     175
216   His Thr Ser Thr Leu Ala Leu Val Phe Tyr Tyr Val Thr Gly Phe Phe
217           180                     185                     190
218   Ile Ala Val Ser Val Ile Thr Asn Val Val Glu Thr Val Pro Cys Gly
219           195                     200                     205
220   Thr Val Pro Gly Ser Lys Glu Leu Pro Cys Gly Glu Arg Tyr Ser Val
221           210                     215                     220
222   Ala Phe Phe Cys Leu Asp Thr Ala Cys Val Met Ile Phe Thr Val Glu
223           225                     230                     235                     240
224   Tyr Leu Leu Arg Leu Phe Ala Ala Pro Ser Arg Tyr Arg Phe Ile Arg
225           245                     250                     255
226   Ser Val Met Ser Ile Ile Asp Val Val Ala Ile Met Pro Tyr Tyr Ile
227           260                     265                     270
228   Gly Leu Val Met Thr Asn Asn Glu Asp Val Ser Gly Ala Phe Val Thr
229           275                     280                     285
230   Leu Arg Val Phe Arg Val Phe Arg Ile Phe Lys Phe Ser Arg His Ser
231           290                     295                     300
232   Gln Gly Leu Arg Ile Leu Gly Tyr Thr Leu Lys Ser Cys Ala Ser Glu
233           305                     310                     315                     320
234   Leu Gly Phe Leu Leu Phe Ser Leu Thr Met Ala Ile Ile Ile Phe Ala
235           325                     330                     335
236   Thr Val Met Phe Tyr Ala Glu Lys Gly Ser Ser Ala Ser Lys Phe Thr
237           340                     345                     350
238   Ser Ile Pro Ala Ser Phe Trp Tyr Thr Ile Val Thr Met Thr Thr Leu
239           355                     360                     365
240   Gly Tyr Gly Asp Met Val Pro Lys Thr Ile Ala Gly Lys Ile Phe Gly
241           370                     375                     380
242   Ser Ile Cys Ser Leu Ser Gly Val Leu Val Ile Ala Leu Pro Val Pro
243           385                     390                     395                     400
244   Val Ile Val Ser Asn Phe Ser Arg Ile Tyr His Gln Asn Gln Arg Ala
245           405                     410                     415
246   Asp Lys Arg Arg Ala Gln Lys Lys Ala Arg Leu Ala Arg Ile Arg Val

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VERIFICATION SUMMARY

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